

SERIAL NO: 10/034,438  
AMDT DATED APRIL 18, 2005  
REPLY TO FINAL OFFICE ACTION OF FEB. 25, 2005

### **I. Amendment to the Claims**

The following listing of claims will replace all prior versions and listings of claims in the application:

#### **Listing of Claims:**

1-17. (Cancelled)

18. (Currently Amended) A database free space management method, comprising:  
identifying a first range of key values associated with a first set of rows in a ~~tablespace~~  
database file;  
assigning first values to each of a plurality of free space management parameters  
associated with the first range of key values;  
identifying a second range of key values associated with a second set of rows in the  
~~tablespace~~ database file;  
assigning second values to each of a plurality of free space management parameters  
associated with the second range of key values, wherein the second values differ  
from the first values by at least one free space management parameter value;  
managing free space associated with the first set of rows in accordance with the first  
values; and  
managing free space associated with the second set of rows in accordance with the  
second values.
19. (Currently Amended) The method of claim 18, wherein the first set of rows are  
associated with a first table in the ~~tablespace~~ database file and the second set of rows are  
associated with a second table in the ~~tablespace~~ database file.

SERIAL NO: 10/034,438  
AMDT DATED APRIL 18, 2005  
REPLY TO FINAL OFFICE ACTION OF FEB. 25, 2005

20. (Currently Amended) The method of claim 18, wherein the act of identifying a first range of key values comprises identifying a first key value and a second key value, wherein the first range of key values ~~is defined as~~ defines a contiguous range of rows as indicated by the first key value minus and the second key value.
21. (Currently Amended) The method of claim 20, wherein the act of identifying a second range of key values comprises identifying a third key value and a fourth key value, wherein the second range of key values ~~is defined as~~ defines a contiguous range of rows as indicated by the third key value minus and the fourth key value.
22. (Previously Presented) The method of claim 18, wherein one or more of the free-space management parameters are selected from the group consisting of "free page value," "free pages value," "percent free value," "end of key range number of free pages" and "maximum number of rows."
23. (Previously Presented) The method of claim 18, wherein the act of assigning first values to each of a plurality of free space management parameters comprises accepting user input for at least one of the first values.
24. (Previously Presented) The method of claim 23, wherein the act of assigning second values to each of the plurality of free space management parameters comprises accepting user input for at least one of the second values.
25. (Currently Amended) The method of claim 18, wherein the first set of rows in ~~[[a]] the tablespace~~ database file comprise rows in a data table or an index.
26. (Currently Amended) The method of claim 18, wherein the second set of rows in ~~[[a]] the tablespace~~ database file comprise rows in a data table or an index.

SERIAL NO: 10/034,438  
AMDT DATED APRIL 18, 2005  
REPLY TO FINAL OFFICE ACTION OF FEB. 25, 2005

27. (Previously Presented) The method of claim 18, wherein the first sets of rows and the second set of rows comprise rows from a single table.
28. (Currently Amended) A program storage device, readable by a programmable control device, comprising instructions stored thereon for causing the programmable control device to:
- identify a first range of key values associated with a first set of rows in a ~~tablespace~~ database file;
  - assign first values to each of a plurality of free space management parameters associated with the first range of key values;
  - identify a second range of key values associated with a second set of rows in the ~~tablespace~~ database file;
  - assign second values to each of a plurality of free space management parameters associated with the second range of key values, wherein the second values differ from the first values by at least one free space management parameter value;
  - manage free space associated with the first set of rows in accordance with the first values;
  - and
  - manage free space associated with the second set of rows in accordance with the second values.
29. (Currently Amended) The program storage device of claim 28, wherein the instructions to identify a first range of key values comprise instructions to identify a first key value and a second key value, wherein the first range of key values ~~is defined as~~ defines a contiguous range of rows as indicated by the first key value minus and the second key value.
30. (Currently Amended) The program storage device of claim 29, wherein the instructions to identify a second range of key values comprise instructions to identify a third key value and a fourth key value, wherein the second range of key values ~~is defined as~~ defines a contiguous range of rows as indicated by the third key value minus and the fourth key value.

SERIAL NO: 10/034,438  
AMDT DATED APRIL 18, 2005  
REPLY TO FINAL OFFICE ACTION OF FEB. 25, 2005

31. (Currently Amended) The program storage device of claim 18, wherein the instructions to:
- identify ~~[[a]]~~ the first range of key values associated with ~~[[a]]~~ the first set of rows in a ~~tablespace~~ the database file, comprise instructions to identify rows from a first table; and
- identify ~~[[a]]~~ the second range of key values associated with ~~[[a]]~~ the second set of rows in a ~~tablespace~~ the database file, comprise instructions to identify rows from a second table.
32. (Previously Presented) The program storage device of claim 31, wherein the first table comprises a data table or an index and the second table comprises a data table or an index.
33. (New) The method of claim 18, wherein the database file is a page set.
34. (New) The program storage device of claim 28, wherein the database file is a page set.
35. (New) A database free space management method, comprising:
- designating a first set of rows of a file object with a first range of key values;
- designating a second set of rows of the file object with a second range of key values; and
- non-uniformly distributing free space within the first and second sets of rows of the file object by distributing free space differently for the first range of key values than for the second range of key values.
36. (New) The method of claim 35, wherein the file object is selected from the group consisting of a page set, a table within a database file, and a plurality of tables in a database file.

SERIAL NO: 10/034,438  
AMDT DATED APRIL 18, 2005  
REPLY TO FINAL OFFICE ACTION OF FEB. 25, 2005

37. (New) The method of claim 35, wherein the act of non-uniformly distributing free space within the first and second sets of rows of the same file object by distributing free space differently for the first range of key values than for the second range of key values comprises:
- assigning first values to each of a plurality of free space management parameters associated with the first range of key values for the first set of rows; and
  - managing free space associated with the first set of rows in accordance with the first values.
38. (New) The method of claim 37, wherein the act of non-uniformly distributing free space within the first and second sets of rows of the same file object by distributing free space differently for the first range of key values than for the second range of key values comprises:
- assigning second values to each of a plurality of free space management parameters associated with the second range of key values for the second set of rows, wherein the second values differ from the first values by at least one free space management parameter value; and
  - managing free space associated with the second set of rows in accordance with the second values.
39. (New) A program storage device, readable by a programmable control device, comprising instructions stored thereon for causing the programmable control device to:
- designate a first set of rows of a file object with a first range of key values;
  - designate a second set of rows of the same file object with a second range of key values;
  - and
  - distribute free space differently for the first range of key values than for the second range of key values to non-uniformly distribute free space within the first and second sets of rows of the same file object.
40. (New) The program storage device of claim 39, wherein the file object is selected from the group consisting of a page set, a table within a database file, and a plurality of tables in a database file.

SERIAL NO: 10/034,438  
AMDT DATED APRIL 18, 2005  
REPLY TO FINAL OFFICE ACTION OF FEB. 25, 2005

41. (New) The program storage device of claim 39, wherein to distribute free space differently for the first range of key values than for the second range of key values to non-uniformly distribute free space within the first and second sets of rows of the same file object, the instructions cause the programmable control device to:

assign first values to each of a plurality of free space management parameters associated with the first range of key values for the first set of rows; and  
manage free space associated with the first set of rows in accordance with the first values.

42. (New) The program storage device of claim 41, wherein to distribute free space differently for the first range of key values than for the second range of key values to non-uniformly distribute free space within the first and second sets of rows of the same file object, the instructions cause the programmable control device to:

assign second values to each of a plurality of free space management parameters associated with the second range of key values for the second set of rows, wherein the second values differ from the first values by at least one free space management parameter value; and  
manage free space associated with the second set of rows in accordance with the second values.